

Date: Monday, 5/26/2008 1:09:54 PM  
 User: Chantal Lavoie

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : PANEL-350 FWD CANOPY
Job Number : 39498	
Estimate Number : 13099	
P.O. Number :	Part Number : D36563
This Issue : 5/26/2008 S.O. No. :	Drawing Number : D3656 REV A
Prsht Rev. : NC	Project Number : 00204
First Issue : / / Type : THERMOFORMING	Drawing Revision : A
Previous Run : 38506	Material :
Written By :	Due Date : 5/30/2008 Qty: 4 Um: Each
Checked & Approved By : <u>JND 08.5.26</u>	
Comment : Est. Rev. A 07/12/13 DL verified by:DD	

## Additional Product

Job Number:



Seq. #:

Machine Or Operation:

Description :

1.0

MLEXS093F600607

GE PLASTICS LEXAN SHEET



Comment: Qty.: 34.6600 sf(s)/Unit Total: 138.6400 sf(s)

GE PLASTICS LEXAN SHEET

batch: M107574DL 08.06.18

2.0

HAND FINISH TH

HAND FINISHING THERMOFORMING



Comment: HAND FINISHING THERMOFORMING

1) Cut Blanks to fit frame size

BB 08/06/18 X

3.0

THERMOFORMING

THERMOFORMING MACHINE



Comment: THERMOFORMING MACHINE

Thermoform as per Dwg. D3656-3 and Folio FTA 016 using tool DT8987

Dwg. Rev. AFolio Rev. ADL 08.06.18

4.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE







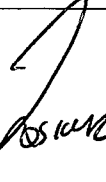

Visually inspect for proper formation of each part

DL 08.06.18

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3656-3 PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☒ No ☐ DQA: D Date: 08/06/18  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR: 39498		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08.06.18	3	Unit did not form. pulled out of clamps RC sheet was not		Scrap & Replace. Qty ① B# M167874 <del>M167874</del>	OK 08.06.18			
		Perfectly centered to the mold.						
		RC: New Development.						

NOTE: Date & initial all entries

Date: Monday, 5/26/2008 1:09:54 PM  
User: Chantal Lavoie

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: PANEL-350 FWD CANOPY

Job Number: 39498

Part Number: D36563

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC8

SECOND CHECK



Comment: SECOND CHECK

BB 08/06/18

XY

6.0

HAND FINISH TH

HAND FINISHING THERMOFORMING



Comment: HAND FINISHING THERMOFORMING

1) Trim to Finished Dimensions as per dwg D3656

BB 08/06/18

XY

7.0

QC2

INSPECT PARTS AS THEY COME OFF MACHINE



Comment: INSPECT PARTS AS THEY COME OFF MACHINE

PT 9

Check dimensions to ensure conformity to drawing tolerances.

BB 08/06/18

XY

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 08/06/18

(X4)

9.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

PPP 39941

6/6/19

SC

10.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

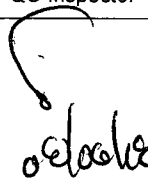
08/06/23

Job Completion



MF 08-06-20

# Dart Aerospace Ltd

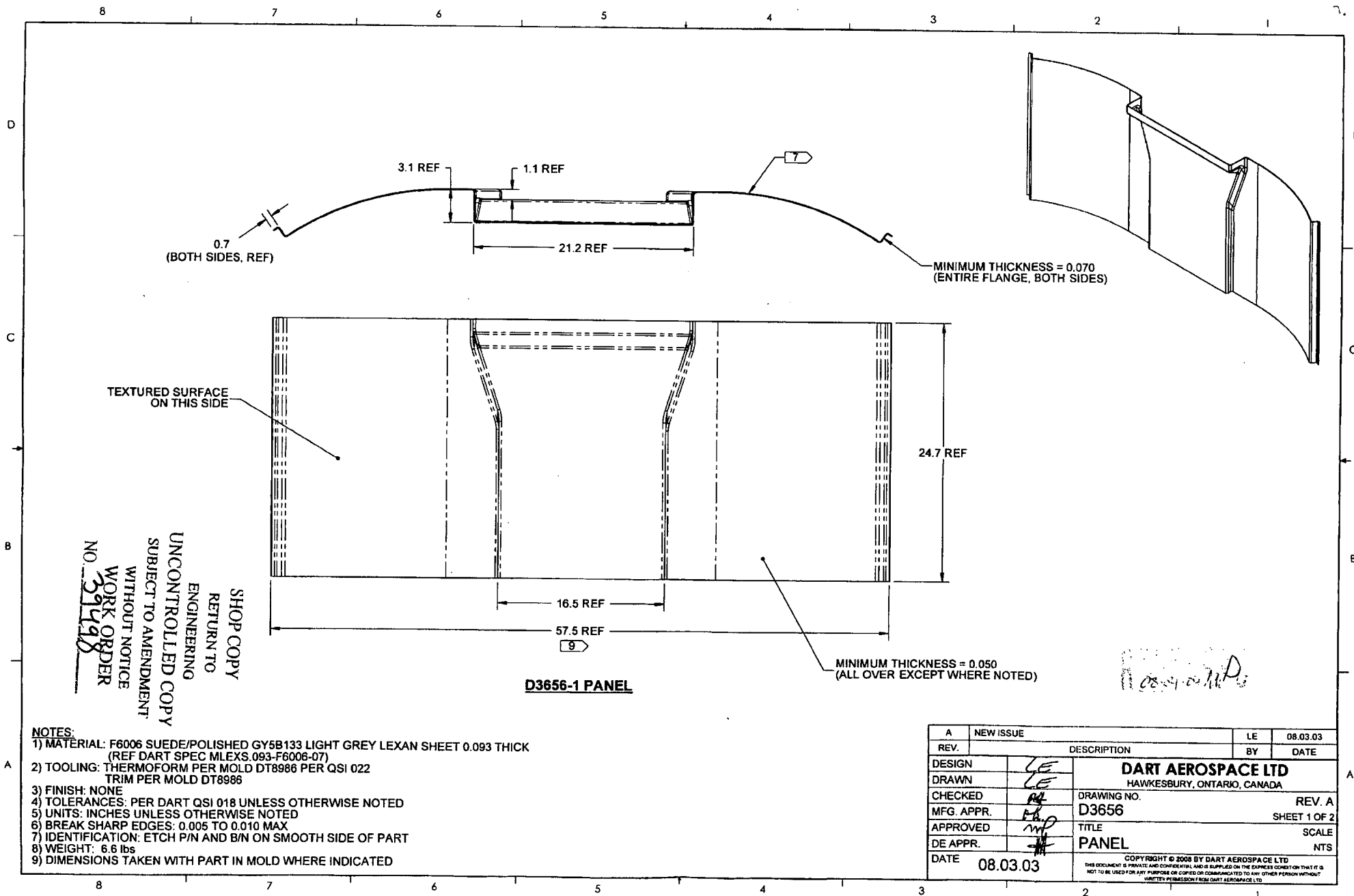
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
08.06.19	7	TRIMMING OF D3655-3 (see DWG D3655 PG 2 ZONE C-2) for ceiling window not required.  PERMANENT CHANGE	PH	08.06.19	ALL (46)	PH 08.06.19 Q35 042 (SEE ATTACHED)	

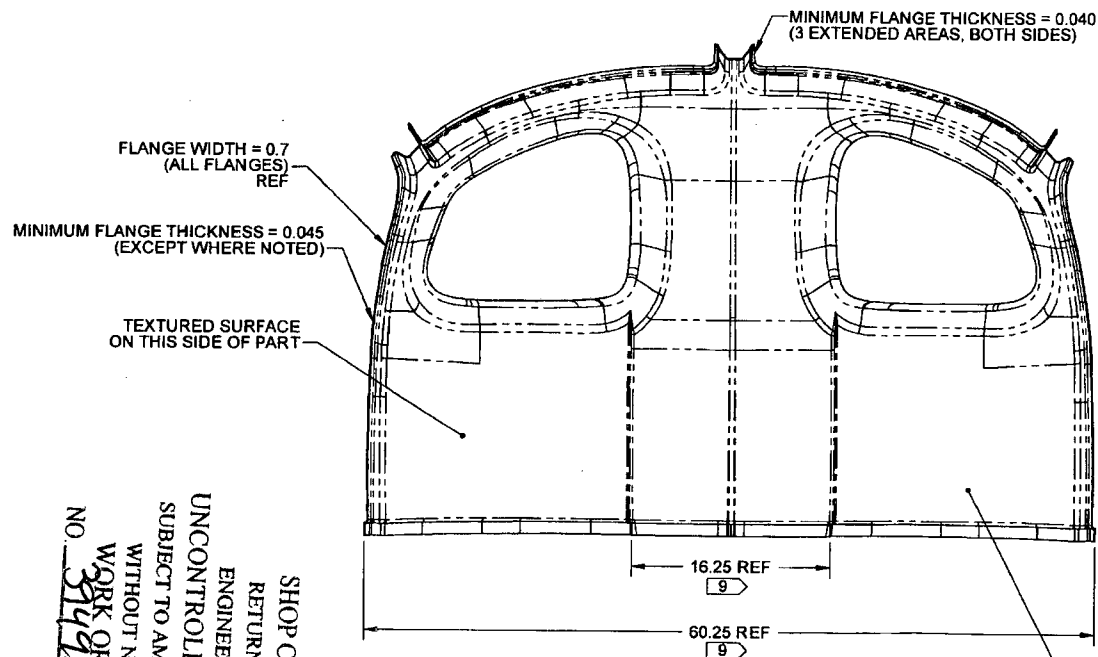
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

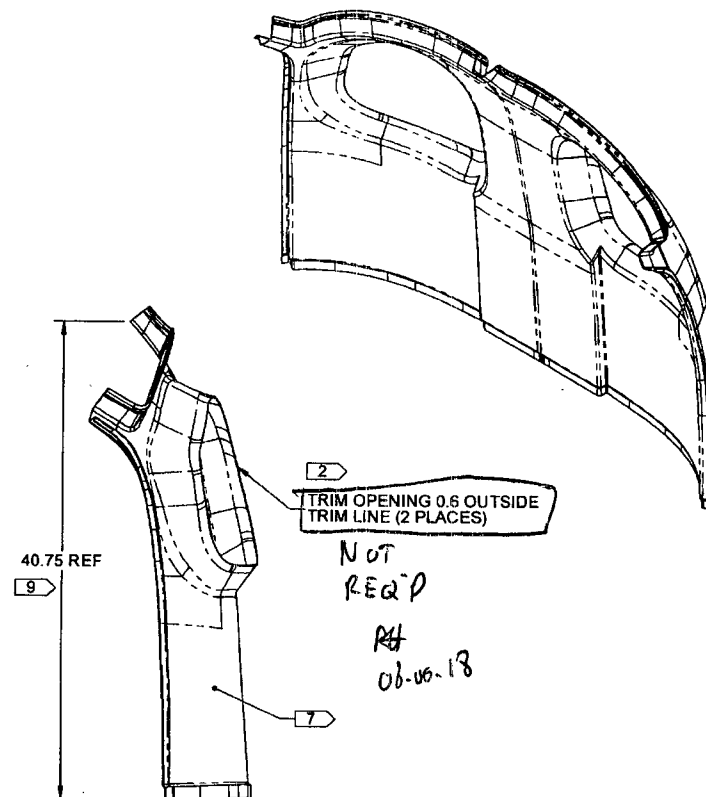
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries





**D3656-3 PANEL**



**NOTES:**

- 1) MATERIAL: F6006 SUEDE/POLISHED GY5B133 LIGHT GREY LEXAN SHEET 0.093 THICK (REF DART SPEC MLEXS.093-F6006-07)
- 2) TOOLING: THERMOFORM PER MOLD DT8987 PER QSI 022 TRIM PER MOLD DT8987 EXCEPT WHERE NOTED
- 3) FINISH: NONE
- 4) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: ETCH P/N AND B/N ON SMOOTH SIDE OF PART
- 8) WEIGHT: 8.7 lbs
- 9) DIMENSIONS TAKEN WITH PART IN MOLD WHERE INDICATED

SHOP COPY  
 RETURN TO  
 ENGINEERING  
 UNCONTROLLED COPY  
 SUBJECT TO AMENDMENT  
 WITHOUT NOTICE  
 WORK ORDER  
 NO. 37498

DESIGN	LE	<b>DART AEROSPACE LTD</b>	
DRAWN	LE	HAWKESBURY, ONTARIO, CANADA	
CHECKED	RE	DRAWING NO.	REV. A
MFG. APPR.	WJP	D3656	SHEET 2 OF 2
APPROVED	WJP	TITLE	SCALE
DE APPR.	WJP	PANEL	NTS
DATE	08.03.03	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DART AEROSPACE LTD	WORK ORDER: 39498	
Description: Forward Canopy	Part Number: 4 D3656	-3
Inspection Dwg: 3653-3 Rev: A		Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

(Step 4) Thermoforming  
Visual Inspection Sign-off

Description	Initial
Acceptable shape definition	✓ [Signature]
Free of visual flaws (bumps, cracks, voids, etc.)	✓ [Signature]

### (Step 6) Trimming FAI Checklist

Inspect dimensions highlighted on inspection sheet drawing \_\_\_\_\_ Rev. A and record below

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
40.75"	0.100"	40.7	✓		Tape	
60.25"	0.100"	60.25	✓		Tape	
0.45" Thickness	Min	.51	✓		vern	
0.40" Thickness	Min	.59	✓		vern	

Measured by: [Signature]
Date: 08/09/18

Audited by: [Signature]
Date: 08/06/19

Prototype Approval: [Signature]
Date: [Signature]

Rev	Date	Change	Revised by	Appro
		New Issue		





DART AEROSPACE LTD	WORK ORDER: 39498	
Description: Forward Canopy	Part Number: 3 D3656	-3
Inspection Dwg: D3656 3 Rev: A		Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

(Step 4) Thermoforming  
Visual Inspection Sign-off

Description	Initials
Acceptable shape definition	
Free of visual flaws (bumps, cracks, voids, etc.)	✓
	✓

### (Step 6) Trimming FAI Checklist

Inspect dimensions highlighted on inspection sheet drawing \_\_\_\_\_ Rev. A and record below

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
40.75"	0.100"	40.75	✓		Tare	
60.25"	0.100"	60.25	✓		Tare	
0.45" Thickness	Min	.57	✓		vern	
0.40" Thickness	Min	.47	✓		vern	

Measured by: BB
Date: 08/06/18

Audited by: S
Date: 09/06/19

Prototype Approval: u
Date: 1/2

Rev	Date	Change	Revised by	Appro
		New Issue		

DART AEROSPACE LTD	WORK ORDER: 39498	
Description: Forward Canopy	Part Number: 2. D3656	-3
Inspection Dwg: 3656-3 Rev: A		Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article    ☐ Prototype

(Step 4) Thermoforming  
Visual Inspection Sign-off

Description	Initial
Acceptable shape definition	✓
Free of visual flaws (bumps, cracks, voids, etc.)	✓

### (Step 6) Trimming FAI Checklist

Inspect dimensions highlighted on inspection sheet drawing \_\_\_\_\_ Rev. 4 and record below

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
40.75"	0.100"	40.75	✓		Tape	
60.25"	0.100"	60.25	✓		Tape	
0.45" Thickness	Min	.52	✓		vern	
0.40" Thickness	Min	.52	✓		vern	

Measured by: BS  
Date: 08/06/18

Audited by: S  
Date: 08/06/19

Prototype Approval: S  
Date: 08/06/18

Rev	Date	Change	Revised by	Appro
		New Issue		

DART AEROSPACE LTD	WORK ORDER: 39498	
Description: Forward Canopy	Part Number: D3656	-3
Inspection Dwg: D 3656-3 Rev: 1		Page 1 of 1

### FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

(Step 4) Thermoforming  
Visual Inspection Sign-off

Description	Initial
Acceptable shape definition	✓
Free of visual flaws (bumps, cracks, voids, etc.)	✓

### (Step 6) Trimming FAI Checklist

Inspect dimensions highlighted on inspection sheet drawing \_\_\_\_\_ Rev. 1 and record below

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
40.75"	0.100"	40.75	✓		Vare	
60.25"	0.100"	60.25	✓		Dare	
0.45" Thickness	Min	.55	✓		vern	
0.40" Thickness	Min	.44	✓		vern	

Measured by: DB
Date: 08/06/15

Audited by: S
Date: 08/06/15

Prototype Approval: 2/4
Date: 08/06/15

Rev	Date	Change	Revised by	Appro
		New Issue		

## **Peter Hum**

---

**From:** David Shepherd [dshepherd@dartaero.com]  
**Sent:** Wednesday, June 18, 2008 3:30 PM  
**To:** 'Peter Hum'  
**Cc:** 'Bill Beckett'; 'Mike Petsche'; 'Daryl Leger'  
**Subject:** RE: Deviation for permanent change on D3656-3 Ceiling Panel - D350-766

OK with me. Update dwg and IIN accordingly.

David

---

**From:** Peter Hum [mailto:phum@dartaero.com]  
**Sent:** Wednesday, June 18, 2008 1:18 PM  
**To:** David Shepherd  
**Cc:** Bill Beckett ; Mike Petsche; Daryl Leger  
**Subject:** Deviation for permanent change on D3656-3 Ceiling Panel - D350-766

David,

Production is making the D3656-3 Ceiling Panel for the D350-766 interiors. Per the drawing, the openings for the aircraft ceiling windows (i.e. skylights) are to be trimmed here @ Dart. See attached drawing (Zone C2).

Production has been determined that the trimming of the openings is time-consuming. In speaking with Daryl, even if we trimmed the openings per the drawing the customer might still need to trim the opening even more to fit his roof (this is based on the fit that was done on the A-Star we have here). It should be noted, that we haven't tried this install or received any feedback from a customer in the field that has installed these.

If the opening is not trimmed @ Dart:

- a) The customer/installer would have to trim the entire opening from scratch. The Installation Instructions only indicates that this panel be centered on the aircraft ceiling windows (see attached excerpt). There is no indication that this area needs to be trimmed by the customer.

Therefore, is it acceptable to NOT trim the openings?

Peter

No virus found in this incoming message.

Checked by AVG.

Version: 7.5.524 / Virus Database: 270.4.0/1507 - Release Date: 6/18/2008 7:09 AM

No virus found in this outgoing message.

Checked by AVG.

Version: 7.5.524 / Virus Database: 270.4.0/1507 - Release Date: 6/18/2008 7:09 AM